

## UNIVERSITY OF VICTORIA NEWSLETTER

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Off Bamfield  
on UVic's  
Vancouver II:  
A net from 40  
fathoms deep  
teems with a  
variety of marine  
life.

### STRANGE BEDFELLOWS

The University of Victoria has brought together 16 men at Bamfield Marine Station for a unique experience that will help them contribute to more environment-aware planning by government and industry.

They are taking part in an intensive short course in Environmental Marine Biology, conceived by Dr. Derek Ellis, a UVic Marine Biologist, and introduced this year on an experimental basis from August 18 to 30 by the Continuing Education Division.

These men come from a variety of professions which include civil, mining and chemical engineering, law, geology, and even medicine.

"The objective of the course is to teach them the language of biology," said Dr. Ellis, who is Chief Instructor.

"The benefits of the course are long-term, because in 10 years' time most of these men will be in managerial positions if they aren't already."

The course is split into field work carried out on UVic's research vessel, Vancouver II, and through beach excursions and into laboratory instruction and lectures.

The first week concentrated on an introduction to marine biology, and the second week has been involved with an environmental monitoring program culminating in a simulated court case on a pollution offence.

Dr. Ellis said the main surprise to the men during the first week was "the enormous and diverse amount of animal and plant life."

Most of the participants are from B.C. with one notable exception being Felipe Calupig, a Mining Engineer and Geologist



from Marcopper Mining in the Phillipines. His company is embarking on an environment impact programme, and when its officials heard about the course, they jumped at the opportunity to send Mr. Calupig.

Dr. David M. Derry, a physician from Victoria, and a biochemist, is attending the course on his own expense and out of his own personal interest in the subject.

Other participants include Ray Addison, Wildlife Biologist from B.C. Forest Service; Joseph Barber-Starkey, Consultant Engineer, Environmental Engineering Division, B.C. Health Branch; James Buchanan, Civil Engineer, B.C. Department of Public Works; Alvin Day, Chemical Engineer, Ker, Priestman & Assoc. Ltd.; Bob Dryden, Civil Engineer, Federal Department of the Environment; David Long, Physicist, H.A. Simons, Ltd.; Ian Marshall, B.C. Hydro Solicitor; Lawrence McGill, Civil Engineer, Ker, Priestman; James Oei, Chemical Engineer, Canadian Forest Products Ltd.; Clem Pelletier, Chemical Engineer, Utah Mines Ltd.; Dr. Merv Stewart, Engineer and Chemist, Associated Engineering Services Ltd.; Jerry Gainer, Gulf Oil Engineer; Ron Hillis, Utah Mines Chemist; and Jim Robertson, Metallurgist, Anaconda Britannia Mines.

Dr. Ellis said a great deal of support in providing the course has come from UVic's Biology Department.

Besides him, instructors include Dr. Mike Ashwood-Smith, Dr. Lou Hobson of UVic; Dr. Lou Druehl, Simon Fraser; Dr. Aubrey Gorbman, the University of Washington; Bob Hutchinson, a Victoria Barrister; and three Simon Fraser University students: Dan Thorlaksen, Barbara Craig, and Barbara Bunting.

Dr. Larry Devlin, Continuing Education Director, who last week paid a visit to Bamfield, said reaction of the participants to the course was very positive. Whether the course will become permanent will be decided after further assessment, he said.

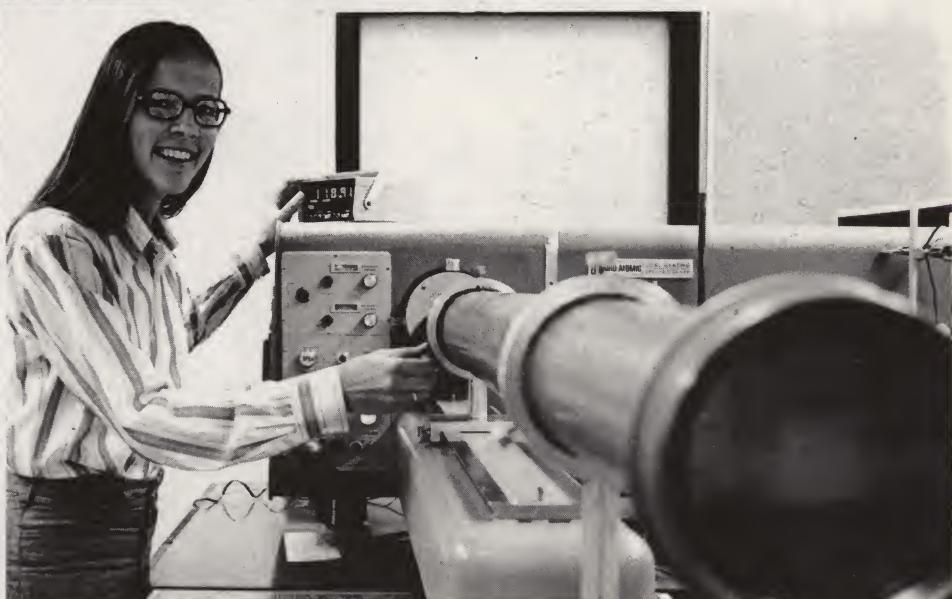
"The course illustrates the national and international potential for academic programmes of this kind," he added. "We hope this potential can be developed."

## ENVIRONMENT STUDIES

British Columbia's first undergraduate programme in Environmental Studies, created because of growing student interest, gets



Fourth-year Astronomy student Sylvia Alers displays the new SkyTrak Heliostat recently installed on the roof of the Elliott Building. What the heliostat simply does, by means of a revolving mirror, is follow the sun through the course of the day, reflecting it down a hole in the roof to a laboratory below. Then the beam is directed into 1882 Alvin Clark telescope, which Dr. Jeremy Tatum calls "a historic instrument", and thence into a spectrograph for analysis. Dr. Tatum said the heliostat will allow UVic astronomers to examine and record the activities of the sun for the first time.



under way this fall at the University of Victoria.

Dr. Peter Murphy (Geography), Programme Chairman, said that although it is too early to tell what enrolment will be in its first year, he has been receiving a "steady stream of inquiries".

The programme is designed to appeal to both students with a general academic interest in the environment, and those with a professional interest, and it offers two options, one stressing urban environment, the other covering a range of disciplines related to environment.

"The idea is that students can take this programme along with their major in the Arts and Science Faculty and receive a notation on their transcripts that they have taken this programme," Dr. Murphy said.

Before it was set up by the Programme

Committee, both students and potential employers and graduate schools were surveyed, and the response was positive.

The survey also indicated that many environment-oriented jobs are opening up in government and private sectors.

Dr. Murphy said that in the U.S. every proposal for a major project has to contain an environment impact statement, and this will likely be the case in Canada soon.

"Interest in ecology is not a passing phase," he said.

The general message from employers is that "they would like students specialized in a particular discipline with the added evidence of a broader interest in environment problems so they can communicate with scientists in other fields on ecological matters."

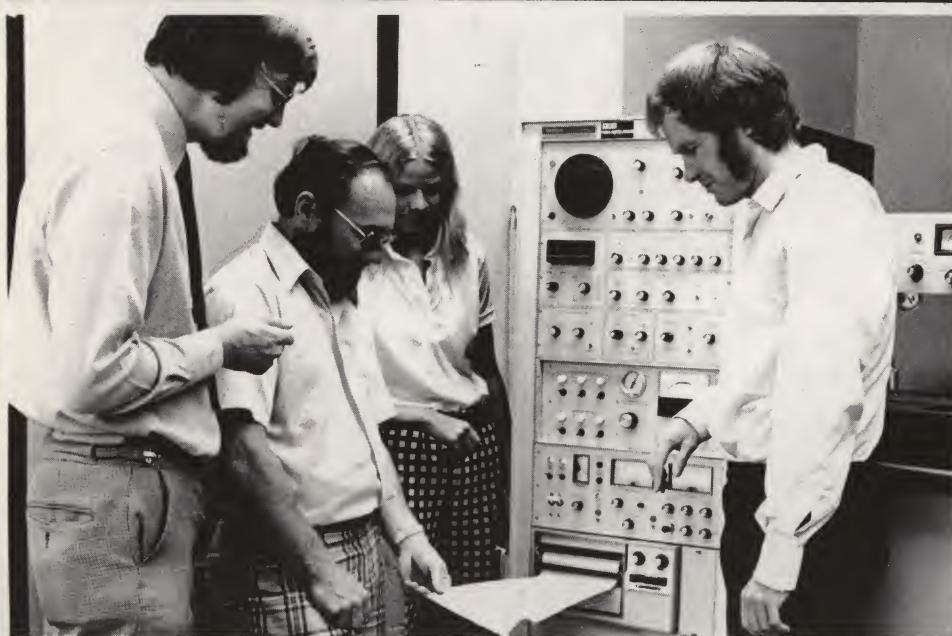
The interdisciplinary approach reflects

the fact that "environment is not the preserve of any one department or field of study."

The programme is augmented by a non-credit seminar featuring visiting specialists. The first two will be Professor John Livingston of York University's Faculty of Environmental Studies in October, and B.C. Liberal Leader David Anderson, who

has been a crusader on ecological issues, in November.

Besides Dr. Murphy, the Programme Committee is made up of Dr. Martin Hocking (Chemistry), Vice-Chairman, Dr. Marcus Bell (Biology), Dr. Alan Drengson (Philosophy), Dr. George Beer (Physics), Dr. Rennie Warburton (Anthropology), and Dr. Gerald Walter (Economics).



This new piece of Chemistry Department equipment, a Gas Chromatograph Mass Spectrometer (GC/MS), will be used to help save the lives of overdose victims. Checking out experiment results are, from left, graduate chemist Graham Shorthill, Dr. G.A. Poulton, undergraduate Dianne Ripley, and Dr. G.R. Branton.

## QUICK OVERDOSE ANALYSIS

University of Victoria chemists are developing a drug identification technique which will dramatically speed up treatment of overdose cases brought into the emergency wards of Victoria hospitals.

Dr. G.R. Branton and Dr. G.A. Poulton explained that where now some drug sample identifications take up to 24 hours in what is often a life-and-death situation, they will have a process which will positively identify the most obscure of drugs as soon as a sample is received.

What will make this possible is the Chemistry Department's new \$55,000 Gas Chromatograph Mass Spectrometer (GC/MS) which can separate and identify a compound in a matter of minutes.

But a technique to use blood and urine samples in the GC/MS requires experimentation, and this is taking up the efforts of Dr. Branton and Dr. Poulton, who are being assisted by Dianne Ripley, a UVic undergraduate chemist, and Graham Shorthill, a graduate.

They are also working in co-operation with the pathology department of Royal Jubilee Hospital, which came up with the problem.

They hope to have the technique operational within a year. They will also propose to set up a system with the hospitals where a technician would be on call 24 hours a day to receive samples taken from overdose patients. There is only one other GC/MS in Western Canada. Only a few communities in Eastern United States are beginning to explore its possibilities as a rapid means of body fluid analysis.

"It is not a well-established technique. It is strictly in the developmental stages," Dr. Branton said.

When it is workable it will in fact be taking "a fingerprint of a compound and provide absolute identification of it", Dr. Poulton said.

This would include all types of drugs, be they barbiturics, hypnotics, tranquilizers or any of the growing maze of soft and hard street drugs.

Dr. Branton said that in most cases

hospitals are able to come up with a general analysis of a drug within a couple of hours which is good enough to start effective treatment.

But in about 25 per cent of cases they are unable to do this because of the rareness of the drug or because it might be complexity of several elements, as, for example, LSD cut on strychnine, itself a deadly compound.

"Often a patient suffering from an overdose is unconscious and can't tell what he has taken. And even if he is conscious he might not know the make-up of what he has taken," Dr. Poulton said.

And "the slowness of analysis increases with the uncommonness of a drug," Dr. Branton said.

The two students working on the project were hired for the summer on a cost-sharing basis with the B.C. Department of Labor under its "Industry Initiative 74" programme.

## CARE HEAD NAMED

Dr. Christopher D. Webster, 38, Research Co-ordinator, the Clarke Institute of Psychiatry, has been appointed Director of the University of Victoria's Child Care Programme, President Hugh E. Farquhar recently announced.

Dr. Webster's appointment is effective July 1, 1975, and in the meantime Dr. Roger Ruth, Associate Professor, Faculty of Education, will be Acting Director.

Dr. Webster will also be a Professor in the Department of Psychology.

Besides being Research Co-ordinator of Clarke's Child and Adolescence Service, Dr. Webster is a special lecturer in the University of Toronto's Centre of Criminology and an adjunct lecturer in its Department of Medicine.

He has published a wide range of research, including works on the effects of amphetamines and marijuana on emotionally disturbed children, and on the training of autistic children through non-verbal instruction.

His principal research is learning and behaviour modification.

Dr. Webster graduated in Honours Psychology from the University of British Columbia. He received his M.A. in Experimental Psychology from Queen's, and his Ph.D. from Dalhousie.

The year-old Child Care Programme has

been off to a flying start. Dr. Ruth said that this term about 200 students will be enrolled in the interdisciplinary course, double last year's 95.

The programme has also drawn widespread attention from child care and mental health concerns in the community.

Dr. Ruth said that 180 jobs were offered to the 65 students who were looking for summer work.

Dr. Ruth became Acting Director on July 1, succeeding Dr. William Gaddes (Psychology), who set up the programme.

## FACULTY NEWS

### MATHEMATICS

A total of 37 mathematicians from seven countries took part in a conference on "Probabilistic Methods in Differential Equations" in the Department of Mathematics here August 19 and 20.

Dr. C.R. Miers was co-ordinator and host to the participants from Canada, the U.S., Britain, France, Australia, Israel and India.

Major speakers were Avner Friedman

### Next Deadline

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and Mark Pinsky, Northwestern University; Kiyosi Ito, Cornell; and S. Varadhan, Courant Institute of Mathematical Sciences, New York.

Professor Friedman and Alain Bensoussan of l'Université Paris, who spoke here as well, also delivered addresses at the International Congress of Mathematicians (ICM) in Vancouver from August 21 to 29.

Dr. Miers arranged the Victoria conference, which was partially funded by the National Research Council, to facilitate attendance by some of the large number of mathematicians who would be in the area for the ICM.

### PHYSICS

Dr. H.W. Dosso, Dr. J.T. Weaver, Dr. V. Ramaswamy and Wilfred Nienaber attended "The Second International Workshop on Electromagnetic Induction in the Earth" held at Carleton University in Ottawa August 22 to 28. They presented three papers on research in electromagnetic induction carried out at the University of Victoria.

### CHEMISTRY

Dr. Walter J. Balfour has returned from Ottawa where he gave an invited paper on "The Spectrum of MgH" to members of the National Research Council of Canada.

Mrs. Florence Best of Cowichan Station and her two children, Andrew, 16, and Sheila, 15, both of Cowichan Senior Secondary, are among the 42 students who have been participating in UVic's annual Transition Programme August 19 to 30. With the Best family is Dr. R.S. Martin, Director of the Reading and Study Skills Centre which gives the programme as a means of teaching prospective campus students reading, comprehension and study skills. Mrs. Best, who will be a part-time student at the University of British Columbia this year, plans to study here next year when UVic's School of Nursing opens, and so do her children when they graduate from high school.



**AROUND THE RING**  
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